Air Force Invention No. AFB00563

Group Art Unit: 1722 Examiner: M. Moore

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31 December 2003 (DATE OF DEPOSIT)

Thomas C. Stover 22,531 NAME OF APPLICANT, ASSIGNEE, OR REG. REP.

31 December 2003 **DATE**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re CIP Application of Joseph D. Lichtenhan et al Application Serial No. 09/783,719

Filed: 16 February 2001

For: ALTERING OF POSS RINGS

Honorable Commissioner for Patents Washington D. C. 20231

Sir:

DECLARATION UNDER 37 CFR 1.132

- I, Joseph D. Lichtenhan of Petal, Mississippi, declare and say that:
- 1. I am one of the inventors in the above-identified application filed on 2-16-01.
- 2. The recent Office Action dated 10-31-03, indicates a belief that the method described in USP 5,589,562 (1996) for making POSS copolymers is similar to or suggestive of the process of claim 20 herein, for expanding rings in POSS compounds and that applicants' resulting product, per claim 25, is also obvious in view of the '562 patent.
- 3. However, the two processes are quite different in that the '562 patent, per column 2, lines 12-34, employs a difunctional compound, X-M-X, as bridging group segments between POSS compounds, to form a linear copolymer. That is, such bridging units are

external to the POSS cage molecules and only link repeating units thereof as shown in Formula 4 of such patent.

- 4. The process of the present invention, as defined in claim 20, acts differently in employing a) a different reagent than the '562 patent, that of Y₂SiRR (not to act as a bridge group segment between and outside of POSS cage molecules but) to b) expand the rings within such cage molecules. Examples of such process are shown in claims 22, 23 and 24 of the present application. Thus the method of the invention serves to expand the internal ring structure of POSS compounds, rather than to externally bridge POSS compounds together in a linear polymer structure, a significantly different process with a distinctly different product than that disclosed in the prior art patent '562. Thus, the novel expanded ring products recited in claim 25 cannot be produced by the '562 method inherently or otherwise.
- 5. I further declare declare that the statements made herein of my own knowledge are true and that all statements, made on information and belief, are believed to be true and furthermore that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above application or any patent issuing thereon.

30 December 2003

Joseph D. Lichtenhan, Declarant